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December 20, 2005

CGI Insurance Company-Littleton Group 8019 North Himes Avenue - Suite 310 Tampa FL 33614 Attention: Joseph Kahlert

Re:

Claim No: 2005-002-288

Insured: James O. "Buddy" Rav

Subject: Report of Findings

RCG File No: 5221647

Dear Mr. Joseph Kahlert

Mr. James Ray reported that his single family dwelling was destroyed by Hurricane Katrina on August 29, 2005. The single family dwelling was located at 470 Beach Blvd. in Long Beach MS 39560; right on the beach at Trautman Avenue.

Rimkus Consulting Group, Inc. was retained by yourself, Mr. Joseph Kahlert on behalf of CGI Insurance Company. We were specifically asked to determine wind vs storm surge. Mr. James Overstreet P.E. performed our visual inspection of the property on Saturday December 2ndth, 2005. Mr. Ray was present for the inspection. A phone contact was made to CGI as well. Weather data used during our evaluation was obtained; included data from Compu-Weather, Inc. and the National Oceanic and Atmospheric Administration (NOAA). Several eyewitness reports will be referenced in this report. Additionally, a reference to NOAA-Hurricane Basics will be made as well.

## CONCLUSIONS

The following conclusions were made after our site visit and a review of the field notes and photographs. Our opinions are as follows:

1. The home had been destroyed by a combination of Wind Gusts, Tornadoes, and Wind Driven Storm Surge. Tornadoes are referred to in NOAA-Hurricane Basics.

Exhibit "E"

- Due to the high incidence of snapped and uprooted trees, and according to
  eye witness accounts, winds much higher than those considered to be
  "sustained" likely contributed to the structural damage to Mr. Ray's home.
- 3. Wind Driven Storm Surge was a major factor in the destruction of the home.

## INTRODUCTION

Hurricane Katrina was one of the strongest storms to impact the coast of the United States during the last 100 years. After crossing South Florida and entering the Gulf of Mexico Katrina began to strengthen reaching category 5 strength hurricane and on August 28, 2005, about 250 miles south-southeast of the mouth of the Mississippi River Katrina's winds reached their peak intensity of 175 mph winds and the pressure fell to 902 mb.

According to published weather data, the highest wind gusts measured along the Mississippi coast on August 29, 2005, were 90 mph at a Keesler AFB in Biloxi, 63 mph in Gulfport, and 50 mph at Pascagoula. Winds as high as 125 mph likely occurred near the point of landfall near the Louisiana/Mississippi border, and winds likely in excess of 100 mph occurred along the entire Mississippi coast. Preliminary data from NOAA estimated winds in the Gulfport area to be 100 to 130 mph.

Following the wind forces, a storm surge from the hurricane produced wide-spread damage from water forces and water contamination. Along the Mississippi coast, there were reported storm surges of 11.27 feet at Green Pass, 12.16 feet at Pascagoula, 26 feet at the Biloxi River at Wortham, and a report of 30 feet above sea level at many places in Hancock County.

## **OBSERVATIONS**

Description of property: The residence was reported to be a 1-story wood frame dwelling. The foundation was an elevated chain wall slab approximately 16 feet above sea level. The exterior walls were covered with brick and stucco. The roof was reportedly of metal. For purposes of this report, the front of the residence was reported to face South.

During the course of our site visit, we observed the following:

- Nothing remained of the home except the steps on the front/south side, and on the west side. A photograph presented to me at the time showed the stairs and brick chain wall remaining after the storm. Also presented was a photo of the home prior to the storm.
- Mr. Buddy Ray and Eye Witness A.J. Viviano (See Photo 4) posed on the west steps. Mr. Viviano is reported to have stayed in his home during the storm and

witnessed both his home and his neighbor's homes destroyed completely by wind prior to the storm surge. (See Photo/Exhibit 10)

- Other Eyewitness accounts include those from Henry Savage (neighbor), Barbara Duncan (neighbor), Tommy Moulton, and Debra Hester. See the Statements. (Photo/Exhibits 7, 8, 9, 15, and 16).
- Mr. Ray reported that a lot of the debris from his house was found well to the
  west of his home, namely parts of the metal roof, parts of the tanning bed, and
  stucco columns.
- Looking at a photo (See Photo 3) presented to me by Mr. Ray taken after the storm on 8/29 and before my inspection on 12/2; Probably in the 10/25 time frame, the chain wall supporting the foundation, is still present. This indicates the possibility that the slab may have been usable, prior to being demolished and removed.
- According to Mr. Ray and his neighbors, there is a path of increased destruction evidenced by snapped, twisted, and uprooted trees. In this path of increased wind destruction, includes the home of A.J. Viviano and the home of Mr. Buddy Ray. This destruction path is shown on a map ( See Photo/Exhibit 6 ).
- Good watermarks were hard to come by with the advent of the cleanup endeavors initiated by the City of Long Beach MS, FEMA, Core of Engr's, etc....

## ANALYSIS

There were a large number of snapped and uprooted trees in the immediate neighborhood of where Mr. Ray's home was situated. This indicating a present of winds much higher than those considered to be "sustained". Eyewitness A.J. Viviano reported that the wind that took his roof off, roared like a tornado for a good period of time prior to impacting his house. Tornadoes are referred to in a document known as NOAA-Hurricane Basics. On pages 12, and 14 of this document, Tornadoes spawned from a Hurricane are considered as being a major cause of wind damage.

Several other neighbors also reported major structural damage being caused by wind; Hamely Henry Savage, and Barbara Duncan. See statements 7,8,9,15,16 below.

Due to the fact that major wind occurred prior to the storm surge, it can be concluded that as much as 50% of the damage was due to wind alone. With the presence of several eyewitnesses, it is possible to conclude that the dwelling was seriously structurally compromised prior to the storm surge due to wind forces, to the extent of being considered a total loss.

A typical storm surge level would have been 25 feet above sea level. With Mr. Rays slab being at 16 feet above sea level, this would have placed 9 feet of water in Mr. And Mrs. Rays home. This would certainly account for a percentage of the overall damage.

By looking at the photos of the front of the house, it is clear that demolition crews removed the slab and chain wall. (See Photos 2, 3, and 5). The possibility that this demolition crew demolished a usable slab presents itself.

This report was prepared for the exclusive use of CGI Insurance Company, and was not intended for any other purpose. Our report was based on information made available to us at the time. Should additional information become available, we reserve the right to determine the impact, if any, the new information may have on our opinions and conclusions, and to revise our opinions and conclusions if necessary and warranted. Photographs taken during our work are retained in our files and are available to you upon request. This report was prepared for our client's use, and we disavow any liability for use by others.

Thank you for allowing us to provide this service. If you have any questions or need additional assistance, please call.

Sincerely,

RIMKUS CONSULTING GROUP, INC.

James Overstreet P.E. Consultant

Corey D. Green P.E. MS Reg. Eng. No. 14873 Senior Consultant

Attachments: Photographs (Ref. 4592-4649)